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Robert Fu

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EXAMINER

MONDT, JOHANNES P

ART UNIT

PAPER NUMBER

3663

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,523	Applicant(s) FU ET AL.	
	Examiner JOHANNES P. MONDT	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Amendment filed 5/23/08 forms the basis for this Office Action. Applicant submitted therein amendments to the Specification and the Drawings. Comments on Remarks submitted with said Amendment are included below under "Response to Arguments".
2. The amendment filed 5/23/08 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: through the Amendment to the Specification in conjunction with the Replacement Sheet for the Drawing of Figure 3 uniquely representative of the elected invention, the connecting line from VBBN1 to N-well 315 "body bias" VBBN1, through the attachment of numeral 370 in the Specification corresponding with reference character 370 in the amended Drawing of Figure 3, has been disclosed as coupled with a second input for controlling switch 350 coupled to a substrate bias supply line; however, as is clear from the Drawing (Figure 3) said input is coupled to a second N-well and does not bias the substrate.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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2. **Claims 1-8 and 21-28** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The internal structure of the single pole double throw switch (SPDT switch) 320, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Specifically, no internal structure of the single pole double throw switch is shown or otherwise disclosed. Although said single pole double throw switch only has a single pole (see, e.g., Hsu, pages 8-9), five terminals connect to said switch. Therefore internal structure information of element 320 is necessary so as to identify the single pole out of a plurality of possibilities of poles between different terminals, and so as to show said single pole's uniqueness ('single pole' implying the absence of a plurality of poles). For instance, which pole is connected to Ground, which to 322 (BBN2), and under what circumstances?

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-8 and 21-28** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Because of the incompleteness of the support in the specification for the disclosure of the single pole double throw switch as explained in section 6 above, the meets and bounds of element 320 are indefinite. Therefore, all claims are indefinite because all claims recite an indefinite component.

Claim Rejections - 35 USC § 102

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-8 and 21-28** are rejected under 35 U.S.C. 102(b) as being anticipated by Rastegar et al (5,422,591). N.B.: the following rejections are provided subject to the noted indefiniteness on the internal structure of the switch / switch means, assuming that a black box representation as disclosed for said switch / switch means with emanating terminals meet the limitation “switch” and “switch means” (see section 8).

On claims 1 and 21: Rastegar et al teach a circuit for regulating the substrate potential of an integrated circuit (see title and abstract; Figure 2) comprising:

a switch 30 or switch means 30 (col. 3, l. 60+);

a first input B (col. 4, l. 2+) capable of controlling said switch coupled to a first N-well bias supply line (through node 20) (the transistors Q1 and Q2 are NMOS transistors, hence source/drain diffusion regions meet “N-well”);

a second input A (col. 4, l. 1+) capable of controlling said switch coupled to a substrate bias supply line (through the line emanating from C);

a first switching terminal or first switching terminal means D (col. 4, l. 14-27) of said switch coupled to a ground; and

an output terminal C (col. 4, l. 2-4) of said switch coupled to a P-type substrate (“P-well” of Q1). Said switch is capable, in fact: configured, to selectively couple said

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second input A to said output terminal C responsive to a voltage of said substrate bias supply line (with node 20) (col. 4, l. 2+).

It is noted furthermore that the claim language that “said switch is operable” constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

On claims 2 and 22: said circuit is capable of electrically couple said P-type substrate to said ground (C to D) when a bias voltage is present on said first N-well bias supply line (col. 4, l. 14-27, especially l. 21-22).

It is noted furthermore that the claim language that “said switch is operable” (claim 2) and “said switch means is operable” constitute intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

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On claims 3 and 23: said circuit is capable of electrically couple said P-type substrate to said substrate bias supply line (B to C) when a substrate bias voltage is present on said substrate bias supply line (col. 4, l. 2+).

It is noted furthermore that the claim language that “said switch is operable” constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

On claims 4 and 24: the circuit further comprises a third input capable of controlling said switch, resp. switch means, coupled to a second N-well bias supply line (source/drain of Q2 meets second ‘N-well’) (Fig. 2).

It is noted furthermore that the claim language that “for controlling said switch” constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

On claims 5 and 25: said switch resp. switch means in the circuit is capable of electrically couple said P-type substrate to said ground (C to D) when a bias voltage is present on said second N-well bias supply line.

It is noted furthermore that the claim language that “operable to electrically couple” constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

On claims 6 and 26: said circuit is capable of electrically couple said P-type substrate to said substrate bias supply line (B to C) when a substrate bias voltage is present on said substrate bias supply line (col. 4, l. 2+).

It is noted furthermore that the claim language that “said switch is operable”, and “said switch means is operable” (claim 26) constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

On claims 7 and 27: the conditions under which the coupling is achieved are not dependent upon the bias voltage on said N-well bias line, but only on whether the voltage on second input A is high (col. 4, l. 2+) and hence the claim is met by virtue of the rejection of claim 6, which is herewith included by reference.

On claims 8 and 28: the conditions under which the coupling is achieved are not dependent upon the bias voltage on said N-well bias line, but only on whether the voltage on second input A is low (col. 4, l. 14-27) and hence the claim is met by virtue of the rejection of claim 5, which is herewith included by reference.

Response to Arguments

7. Applicant's arguments filed 5/23/08 have been fully considered but they are not persuasive.

a. With regard to the Replacement Sheet for the Drawings and the Amendment to the Specification, Applicant introduces new matter through Drawings and Specification (see section 2 above, herewith included by reference in its entirety) while applicant does not respond to the stated requirement to identify the single pole that is the defining characteristic of the single pole double throw switch of applicant's invention.

With regard to 35 USC 102: applicant's traverse appears to be based on the arrow attached to output terminal C and to the nomenclature adopted for said terminal in the rejection as "output terminal C". However, said terminology comes straight from applicant's own claim language (line 11 of the independent claim 1), while no distinction is in evidence in the manner in which the output terminal of applicant and of Rastegar et

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al may be used. Applicant is once more reminded of the functional language adopted in the claim language (see page 6 of the previous office action): Applicant is reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). In the instant case second input and output are connected by the switch and hence the operability of coupling is ensured in principle. Furthermore, applicant defines "coupling" to mean "physical coupling" (see page 6, line 20+), which is ensured merely by the supply lines. Even arguendo, in both teachings the switch is operable to selectively couple said second input (through 322 in the claimed invention and A in Rastegar et al) for controlling the switch to said output terminal (350 in the claimed invention and C in Rastegar et al) responsive to a voltage of said substrate bias supply line (370 in the claimed invention, the substrate bias supply line connected to C), because action is triggered when A is sufficiently high in comparison with C.

In conclusion, Applicants' arguments are not deemed persuasive. Accordingly the art rejections stand.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Johannes P Mondt/
Primary Examiner, Art Unit 3663